9th CLASS GUESS PAPER BIOLOGY 2023.

ALL PUNJAB : Lahore, Sahiwal, Faislabad, Sargodha, Multan, Azad Kashmir. Dera Ghazi Khan. Gujranwala, Bahawalpur

CHAPTER NO. 1 INTRODUCTION TO BIOLOGY.

KNOWLEDGE BASE QUESTIONS. 50%

1. What is biotechnology?
2. What is community? Give example.
3. What are fossils?
4. Difference between Population and community.
5. What is Bio sphere level?
6. What is meant by horticulture and also define its relation with agriculture?
7. Difference between environmental and cell biology.
8. What is medicine and surgery?
9. Difference between entomology and immunology.
10. Write four names of unicellular organism.
11. Biotechnology helps mankind, Justify.

UNDERSTANDING BASED QUESTIONS. 35%

1. Give points to advocate that biology is linked with physics, chemistry, mathematics, geography and economics.
2. Describe the levels of organization of life.
3. How would you define biology and relate it with its major divisions?

APPLICATION BASED QUESTIONS. 15%

1. What is mean of Habitat?
2. Identify different tissues in the photomicrographs of different organs.

LONG QUESTIONS.

1. Give comparison in cellular, colonial and multicellular organism.
2. Write a comprehensive note on Farming and Forestry.

CHAPTER NO. 2 SOLVING A BIOLOGICAL PROBLEM.

KNOWLEDGE BASED QUESTIONS. 50%

1. Define Biological method.
2. Difference between theory and law.
3. Difference between Qualitative observation and Quantitative observation.
4. What are the observation of A.F.A.King?
5. Define Binomial nomenclature.
6. What are endangered species?
7. Explain why biologist report the result of their findings at National and international level.
8. What is meant by Data organization?
9. Write down the names of steps included in the Biological method.

UNDERSTANDING BASED QUESTIONS.35%

1. Justify mathematics as an integral part of the scientific process.
2. How the principles of ratio and proportion are used in biological method.

APPLICATION BASED QUESTIONS. 15%

1. While testing the hypothesis that plasmodium is the cause of malaria, what would be the control group of the experiment?
2. Confirm, modify, or reject a hypothesis using data analysis.

LONG QUESTIONS.

1. Which professions can be adopted after biological studies? Explain any four.
2. How Plasmodium gets into human body?
3. Explain the importance of data organization and data analysis in biological method.

CHAPTER NO. 3 BIODIVERSITY

KNOWLEDGE BASED QUESTIONS. 50%

1. What are the aims of classification?
2. Give two reasons of exclusion of Kingdom Fungi from Kingdom Plantae.
3. Define flora and fauna.
4. Define systemic.
5. Define Extinct species.
6. Describe the two kingdom system of classification.
7. Define Kingdom Monera.
8. What is meant by Taxonomic Hierarchy?
9. Discuss viruses are livings or non-livings.
10. Difference between taxonomy and systematics?

UNDERSTANDING BASED QUESTIONS. 35%

1. Justify why virus are excluded from the Five-Kingdom classification system.
2. Identify causes of deforestation and its effects on biodiversity.
3. It's impact of human beings on biodiversity.

APPLICATION BASED QUESTIONS. 15%

1. How can you divide the five Kingdom into two groups on the basis of types of cells?
2. How many people rely on wood for heating and cooking?

LONG QUESTIONS.

1. Describe the significance of Binomial nomenclature with example.
2. What is meant by Taxonomy? Write taxonomic hierarchy in order.
3. Explain three main types of organisms placed in Kingdom Protista.

CHAPTER NO. 4 CELLS & TISSUES.

KNOWLEDGE BASED QUESTONS. 50%

1. Write down any two principles included in a cell theory.
2. What is the fiction of leucoplasts and chromoplasts?
3. Define plasmodesmata.
4. Define semi permeable membrane.
5. Write down the functions of a cell membrane.
6. Write two functions of cytoplasm.
7. What are leucoplasts and where do they occur?
8. What are functions of smooth endoplasmic reticulum?
9. Difference between centrosome and centrioles.
10. Difference between Light Microscope and Electron microscope
11. What is nuclear envelope?
12. Difference between diffusion and facilitated diffusion?
13. What is meant by hypertonic and hypotonic solutions?

UNDERSTANDING BASED QUESTIONS. 35%

1. Why endoplasmic reticulum is called rough and smooth endoplasmic reticulum.
2. Describe how turgor pressure develops in a plant cell.
3. How surface area to volume ratio limits cell size.

APPLICATION BASED QUESTIONS. 15%

1. Which type of microscope would you use to study?
2. How human body made types of cells.
3. Explain why it is not enough just to say that a solution is "hypertonoc".
4. Birds fly by flapping their wings. What do you thing is the type of muscle responsible for wings flapping?

LONG QUESTIONS.

1. Difference between Prokaryotic and Eukaryotic cells.
2. Explain the structure and functions of Xylem and Phloem.
3. Describe the structure of cell wall.

CHAPTER NO. 5 CELL CYCLE.

KNOWLEDGE BASED QUESTIONS. 50%

1. What is meant by G1 phase in a cell cycle?
2. Explain G0 phase.
3. What is interphase? Write the names of its phases.
4. Define germ line cells.
5. Difference between somatic and germ line cells.
6. Difference between Chromatin and Chromosomes.
7. What is meant by regeneration? Give example.
8. Difference between Meiosis and mitosis.

UNDERSTANDING BASED QUESTIONS 35%

1. Cell work as an open system. Explain.
2. How is mitosis significant?
3. What is cell cycle and what are its main phases?

APPLICATION BASED QUESTIONS 15%

1. Why are tumors dangerous for human body?
2. Nucleus is visible only in interphase while chromosomes are only visible I cell division stage. Why is that?
3. During crossing over, genetic material is exchanged between sister/non-sister chromatids of homologues /non homologous chromosomes.

CHAPTER NO. 6 ENZYMES.

KNOWLEDGE BASED QUESTIONS 50%

1. What is meant by hypertonic and hypotonic solutions?
2. What is metabolic pathways?
3. Write two benefits of active site.
4. Define optimum temperature. What is optimum temperature of Human enzyme?
5. Enzyme lower the activation energy of chemical reaction explain two methods.
6. Birds have high body temperature than mammals. What would happen to activity of bird's enzymes it is given temperature of 37 oC.
7. Introduced –fit model of enzyme action is more acceptable than lock and key model of enzyme action Justify.
8. Difference between Anabolism and catabolism.
9. What is Optimum pH?

UNDERSTANDING BASED QUESTIONS -35%

1. What do you mean by activation energy and why it is referred in the definition of enzymes?
2. Briefly describe the factors that affect the activity of enzymes.
3. In a range of 0-35 oC, the rate of reaction an enzyme is proportional to temperature.

APPLICATION BASED QUESTIONS.15%

1. All enzymes are catalyst.
2. The optimum temperature for the maximum working speed of human.

LONG QUESTIONS.

1. Write down the characteristics of enzymes.
2. Describe the uses of enzymes in different industries.

CHAPTER NO. 7 BIOENERGETICS.

KNOWLEDGE BASED QUESTIONS. 50%

1. What is the difference between oxidation and reduction?
2. Define Photosynthesis. Write its equation.
3. Write down the necessary condition for photosynthesis.
4. Difference between light and dark reaction.
5. Define the term limiting factors in photosynthesis. Also give an example.
6. Define respiration and cellular respiration.
7. Define alcoholic fermentation and lactic acid fermentation.
8. Difference between aerobic and anaerobic respiration?
9. Compare aerobic and anaerobic respiration with respect to site of occurrence and final products.
10. Define Metabolism
11. Define NDPH.
12. Define Krebs cycle
13. Explain redox reactions in living organisms.

UNDERSTANDING BASED QUESTIONS. 35%

1. Outline the process involved in photosynthesis?
2. Outline the mechanism of respiration while defining glycolysis.

APPLICATION BASED QUESTIONS. 15%

1. In dark reactions, 3-carbon compounds are reduced to form carbohydrates. What is the ultimate source of these hydrogen for this reduction?
2. There are more chloroplasts n the palisade mesophyll than in the spongy mesophyll. Why?

LONG QUESTIONS.

1. How energy is released during oxidation reduction reactions in living organisms.
2. What meant by ATP? Write some of its fuctions. Also write the chemical Structure of ATP molecule.
3. Describe the mechanism of respiration.
4. Explain the summary of light reaction and draw a diagram of Z-Scheme.
5. Describe difference between Photosynthesis and respiration.

CHAPTER NO. 8 NUTRATION

KNOWLEDGE BASED QUESTIONS. 50%

1. Difference between Macronutrients and Micronutrients.
2. Which are autotrophic and heterotopic organisms?
3. Difference between macronutrients and micronutrients.
4. Explain the effect of deficiency of Nitrogen and magnesium on the plants.
5. How can the deficiency of vitamins A cause blindness?
6. Balanced diet differs with age and gender. Explain.
7. Pepsin is a powerful protein digesting enzyme. It does not digest the stomach walls, which are mostly proteins. Justify.

UNDERSTANDING BASED QUESTIONS.35%

1. How are inorganic fertilizers important in agriculture?
2. Why are water and dietary fiberes considered important in our diets?
3. Describe swallowing and peristalsis.

APPLICATION BASED QUESTIONS. 15%

1. If we supply inorganic and organic fertilizers to a plant, which one would be first available to the plant for uptake?
2. How proteins can be converted into carbohydrates.
3. Which of the major components of food is needed as the main structural component of the body.
4. If due to any reason, the direction of peristalsis reverses, what would be the result?

LONG QUESTIONS.

1. Write down the importance of Fertilizers.
2. Write a note on water and dietary fiber in diet.
3. Write a note on Lipids.

CHAPTER NO. 9 TRANSPORT

KNOWLEDGE BASED QUESTIONS. 50%

1. Define stomatal transpiration.
2. What is transpirational pull?
3. Give harmful and beneficial aspects of transpiration.
4. Differentiate between source and sink.
5. Patients bleed from the nose, gums and under the skin a dengue fever. Give reason.
6. Define universal donors and universal recipients.
7. Write down four factors affecting the rate of transpiration.
8. How is plasma separated from blood?
9. Difference between Biscuspid and Tricuspid valve.
10. What is Angina Pectoris?
11. Write the names of different chambers of human heart.
12. What is blood? Write the name of its parts.

UNDERSTANDING BASED QUESTIONS. 35%

1. How do different factors affect the rate of transpiration?
2. List the functions of the components of blood.
3. State the causes, treatments and prevention of myocardial infarction.
4. Transpiration is necessary evil. Give comments.
5. Compare the structure of function of an artery, a vein and a capillary.

APPLICATION BASED QUESTIONS. 15%

1. According to the pressure flow mechanism what is the actual force behind the movement of food in phloem?
2. How is plasma separated from blood?
3. Normal person red blood cells destroyed every second.
4. Which blood cells are the most numerous in healthy human body?
5. When does our heart take rest? During sleep, during sitting, or never!
6. Through which blood vessel the oxygenated blood leaves the human heart?

LONG QUESTIONS.

1. Explain structure, location and function of any four types of epithelial tissue.
2. What do you mean by blood groups? How do we classify blood groups in terms of ABO and Rh blood group system?
3. Explain the significance of transpiration.
4. How uptake of water ions take place in Plants.